463761 - COMPARISON BETWEEN SEDATION AND GENERAL ANESTHESIA FOR ENDOSCOPY IN CHILDREN

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Introduction: With the increasing safety of endoscopic examination, upper and lower gastrointestinal (G.I) endoscopy are being performed with increasing frequency in children. G.I endoscopy can be done with intravenous sedation or under general anesthesia. In many medical centers, the use of general anesthesia for upper and lower gastrointestinal endoscopy has been replaced by intravenous sedation. The aim of this study was to compare the safety and efficacy of general anesthesia and deep sedation in children undergoing gastrointestinal endoscopy.

Methods: After ethics committee approval, 125 children, 1 to 6 years of age, ASA I-III, undergoing elective upper and/or lower gastrointestinal endoscopy were enrolled. Children were divided into three groups. In Group 1 anesthesia was induced and maintained with a combination of air/oxygen/sevoflurane. In Group 2, anesthesia was induced with propofol 2 mg/kg and maintained with propofol 250-300 mcg/kg/min. In Group 3, anesthesia was induced with sevoflurane and maintained with a combination of propofol 80 mcg/kg/min and remifentanyl 0.1 mcg/kg/min. Demographic data, hemoglobin oxygen saturation, respiratory rate, blood pressure, and heart rate were monitored continuously and recorded at baseline and every 5-minutes. Adverse effects, recovery time, and discharge time were also recorded

Results: 121 children completed the study. Hemodynamic stability was maintained in all children throughout the procedure. Respiratory depression was observed in two children in the GA group, and three children in the propofol group. No episodes of respiratory depression were observed in the propofol/remifentanyl group. Episodes of desaturation ($\text{SaO}_2 < 90 \text{ mmHg}$) were observed in 3 children in the GA group, two patients in the propofol group, and in one child of the propofol remifentanyl group. Rescue bolus of propofol 1mg/kg was needed in two children in the propofol group and one patient in the propofol/remifentanyl group due to excessive movement. All children had their eyes open within 5 min after arrival to the recovery area. No complications were recorded in the recovery period.

Discussion: Based on the result of this study, this study show that deep sedation and general anesthesia are equally effective and safe anesthetic regimens in spontaneously breathing children undergoing gastrointestinal endoscopy.

References: 1- Gastrointest Endosc 1997; 45: 375-380.